APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/410,367	09/30/1999	JEFFREY D. SAFFER	01413.0009	6759

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ART UNIT	PAPER NUMBER
2623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)
Office Action Summary	09/410,367		SAFFER ET AL.
	Examiner		**Art Unit**
	Mehrdad Dastouri		2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *November 6, 2003*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-17,19 and 63-67* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-17,19 and 63-67* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1.   Applicants' reply filed on November 6, 2003, has been entered and made of record.

2.   Applicants' remarks have been fully considered but they are not persuasive.

Applicants argue in essence that prior art of record (Clark et al.) does not disclose the attributes selected from an object attributes comprise a plurality of data type.

The Examiner disagrees and respectfully submits that the reasoning indicated at Page 3 of the Office Action is not _flawed_. Nomenclatures used in Columns 3 and 4 of Clark's invention denote a program written in "C" Language. Consequently, the nomenclatures "char*", "int" and "float" which are known in "C" Language ascertain the code segments include different data types, i.e., text and numerical. The number of occurrence is a completely different matter that is not relevant to the fact that the code is comprised of different segments (text and numerical).

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-3, 6, 8, 12, 14, 15 and 65-67 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al (U.S. 5,574,837).

Regarding Claim 1, Clark et al disclose a method for analyzing data for different

data types, comprising:

selecting a set of attributes associated with an object, wherein the attributes

selected comprise a plurality of data types selected from a group consisting of a text

data type, a numerical data type, a categorical data type, and a sequence data type

(Figures 3 and 4; Column 3, Lines 25-67, Column 4, Lines 1-62. Code segments f_0, f_1

and f_2 are objects having attributes identified by identifiers (I) and types (T). The

attributes are comprised of text data type (Relation, Name) as well as numerical data

types (Age));

transforming the selected attributes into n-dimensional vectors (Figure 2-6;

Column 4, Lines 23-63. Vector (T) is an n-dimensional vector that represents attributes

identified and labeled (transformed) from each code segment.);

applying transformation operations to the selected attributes (Figures 2-6;

Column 4, Lines 23-67, Column 5, Lines 1-39. The selected attributes are transformed

by applying weighting factors.);

indexing the n-dimensional vector, certain attributes, and a result of the

transformation operations (Column 4, Lines 36-62); and

displaying a representation of the object based on the selected attributes (Figure

5; Column 5, Lines 40-67, Column 6, Lines 1-37).

Regarding Claim 2, Clark et al disclose a computer-implemented method of

analyzing various data types, comprising the steps of:

defining a uniform data structure for representing objects of different

data types (Figures 2 and 3; Column 2, Lines 49-67, Column 3, Lines 1-54. Reference

is made to U.S. Patent 5,953,006 to Baker et al (Patent Application Serial Number

07/853,459) incorporated by reference in Clark et al invention.);

segmenting certain attributes of a plurality of different objects of different data

types into elements that are representable in said uniform data structure (Figures 2-6;

Column 3, Lines 55-67, Column 4, Lines 1-62); and

operating on said certain attributes to produce at least one representation of said

objects based on said uniform data structure (Figures 2-6; Column 4, Lines 22-62).

Regarding Claim 3, Clark et al further disclose the method of Claim 2 wherein

said plurality of different data types comprises a combination of any two of numeric,

sequence string, categorical, or text data types (Column 4, Lines 22-35. Code

segments comprise a combination of Text and Numeric data type (T).).

Regarding Claim 6, Clark et al further disclose the method of Claim 2 wherein

said step of operating on said selected attributes produces a vector representation of

said objects in correspondence with said uniform data structure (Figure 2-6; Column 4,

Lines 22-62).

Regarding Claim 8, Clark et al disclose the method of Claim 6 wherein the data

representations are vector representations (Figures 2-6; Column 4, Lines 22-35).

Regarding Claim 12, Clark et al further disclose the method of Claim 2 wherein

said step of segmenting comprises creating a plurality of said elements from a

sequence of string sequence data (Figures 2-6; Column 3, Lines 25-67, Column 4,

Lines 1-62).

Regarding Claim 14, Clark et al further disclose the method of Claim 2 further

comprising using said representation to identify cluster groups of related objects

(Figures 2-6; Column 3, Lines 55-67, Column 4, Lines 1-62).

Regarding Claim 15, Clark et al further disclose the method of Claim 2 further

comprising creating two-dimensional projections of cluster groups for two dimensional

visualizations (Figure 5, Cluster information f_0, f_1 and f_2; Column 5, Lines 40-67, Column

6, Lines 1-37).

With regards to Claims 65-67, arguments analogous to those presented for Claim

1 are applicable to Claims 65-67. Concerning Claims 66 and 67 for analyzing genomic

sequence data, reference is made to U.S. Patent 5,953,006 to Baker et al (Patent

Application Serial Number 07/853,459) incorporated by reference in Clark et al

invention.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Clark et al (U.S. 5,574,837) in view of Strasnick et al (U.S. 5,671,381).

Regarding Claim 4, Clark et al do not explicitly disclose the method of Claim 3 wherein said plurality of different data types comprise a combination of any three of numeric, reference string, categorical, and text data types.

Strasnick et al disclose a method for visualization of different data types comprising a combination of numeric, reference string, categorical, and text data types (Figures 2A, 10A, 10B and 11; Column 6, Lines 34-67, Column 7, Lines 1-8; Column 20, Lines 34-48. The visualized data types in Figures 2A and 10B comprise a combination of numeric, reference string, categorical, and text data types.).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Clark et al invention according to the teachings of Strasnick et al to provide visualization of different data types comprising a combination of numeric, reference string, categorical, in text data types because it will expand versatility of visualization system and improve decision making in research analysis.

Regarding Claim 5, Clark et al do not explicitly disclose the method of Claim 4 wherein said data types comprise numeric, sequence string, categorical and text data types.

Strasnick et al disclose a method for visualization of different data types comprising a combination a combination of a numeric data type, a sequence string data type, a categorical data type and a text data type (Figures 2A, 10A, 10B and 11; Column 6, Lines 34-67, Column 7, Lines 1-8; Column 20, Lines 34-48. The visualized data types in Figures 2A and 10B comprise a combination of numeric, sequence string, categorical, and text data types.).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to modify Clark et al invention according to the teachings of

Strasnick et al to provide visualization of different data types comprising a combination

of numeric, sequence string, categorical and text data types because it will expand

versatility of visualization system and result in making enhanced research decisions.

7.   Claims 7, 9-11,16, 17, 19, 63 and 64 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Clark et al (U.S. 5,574,837) in view of J.C. Roberts (IEEE

Paper; On Encouraging Multiple Vies for Visualization).

Regarding Claim 7, Clark et al do not explicitly disclose the method of Claim 2

further comprising producing an index that includes second representations of non-

selected attributes of a particular object and associating the non-selected attributes with

a particular representation of said first representations.

Roberts discloses a system for multiple views visualization comprising producing

an index that includes second representations of non-selected attributes of a particular

object and associating the non-selected attributes with a particular representation of the

first representations (Figures 2-4 and 7A-E; Sections 3.1 and 4. Figures 7B, 7C and

7D visualize the surface image features of the block of material, feature sets of different

pressures in the block and different pressure sets, respectively, associated to each

other.).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to modify Clark et al invention according to the teachings of J.C.

Roberts to produce an index that includes second representations of non-selected

attributes of a particular object and associating the non-selected attributes with a

particular representation of the first representations because it will improve analyzing

the features of different data by expanding sampling of the data population.

Regarding Claim 9, J.C. Roberts further disclose the method of Claim 2 further

comprising using a first set of selected attributes associated with a first set of objects to

determine the relationships among the first set of objects of a particular data type and

using non selected attributes associated with the first set of selected attributes to

correlate objects represented by the first set of selected attributes with a second set of

objects represented by a second set of selected attributes (Figures 2-4 and 7A-E;

Sections 3.1 and 4. Figures 7B, 7C and 7D visualize the surface image features of the

block of material, feature sets of different pressures in the block and different pressure

sets, respectively, associated to each other. Furthermore, feature sets of different

pressures in the block depicted in Figure 7C will be correlated with the result of

pressure feature sets in the air (second object).).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to modify Clark et al invention according to the teachings of J.C.

Roberts to implement further limitations of Claim 9 because it will improve analyzing the

features of different data by expanding sampling of the data population.

Regarding Claim 10, J.C. Roberts further disclose the method of Claim 9 further

comprising identifying, using said non selected attributes, at least one object of said

second set of objects that corresponds to a selected object or objects of said first set of

objects (Figures 5, 6 and 7A-7E)-.

Regarding Claim 11, J.C. Roberts further disclose the method of Claim 10 further comprising displaying said first and second set of objects in first and second windows on a display screen and highlighting said second set of objects that corresponds to said selected object or objects (Figures 5 and 7C. Figure 7C depict the stationary block of material and the air are displayed and highlighted in different windows.).

With regards to Claim 16, arguments analogous to those presented for Claims 2 and 9 are applicable to Claim 16. J.C. Roberts further disclose "displaying first graphical results of a first type analysis performed on selected attributes of a first data set" and "displaying second graphical results of a second type analysis performed on selected attributes of a second data set" as depicted in Figure 7 and Section 4 for 'multiple viewing visualization".

Regarding Claim 17, J.C. Roberts further disclose the method of Claim 16 wherein said step of highlighting is based on attributes not used for creating said first graphical results (Figures 7C and 7D).

With regards to Claim 19, arguments analogous to those presented for Claims 2, 6 and 9 are applicable to Claim 19.

With regards to Claims 63 and 64, arguments analogous to those presented for Claim 16 are applicable to Claims 63 and 64.

8.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al (U.S. 5,574,837) in view of Magdi Mohamed et al (IEEE Pattern Analysis and Machine Intelligence; Handwritten Word Recognition Using Segmentation-Free Hidden Markov Model and Segmentation-Based Dynamic Programming Techniques).

Regarding Claim 13, Clark et al do not explicitly disclose the method of Claim 12

wherein said step of segmenting comprises selecting words of a text document that

meet certain preselected criteria.

Magdi Mohamed et al disclose a handwritten word recognition using

segmentation based Dynamic Programming wherein the step of segmenting comprises

selecting words of a text document that meet certain preselected criteria (Pages 8 and

9, Sections IIIA and IIIB, Segmentation and Dynamic Programming matching; Figure 5).

It would have been obvious to a person of ordinary skill in the art at the time the

invention was made to modify Clark et al invention according to the teachings of Magdi

Mohamed et al to consider a step of segmenting comprises selecting words of a text

document that meet certain preselected criteria because it will provide an advanced

analyzing system and improve capability of the recognition system to achieve

significantly better performance.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

. A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the T.C. Customer Service Office whose telephone number is (703) 306-0377.

MEHRDAD DASTOURI
PRIMARY EXAMINER

Mehrdad Dastouri
Primary Examiner
Group Art Unit 2623
January 22, 2004